



## DHS Office of Health Affairs

### *Risk-Informed Biodefense Countermeasure Strategies and Policy-making*

International Discussion of Bioterrorism Risk  
6-7 October 2009

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DHS Office of Health Affairs



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## DHS Office of Health Affairs



### VISION

*A Nation prepared for the health  
consequences of catastrophic incidents*

**MISSION:** The Office of Health Affairs serves as the Department of Homeland Security's principal agent for all medical and health matters. Working throughout all levels of government and the private sector, the Office of Health Affairs *leads the Department's role in developing and supporting a scientifically rigorous, intelligence-based biodefense and health preparedness architecture* to ensure the security of our Nation in the face of all hazards.



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## OHA's Primary Goals

- Serve as the *principal medical authority* for the Department of Homeland Security
- Lead the Department's *biodefense* responsibilities
  - End-to-end leadership for implementation of HSPD-9 (Ag/Food Defense) and HSPD-10 (biodefense), including early threat detection and biosurveillance integration
- Lead a coordinated *National architecture for Weapons of Mass Destruction (WMD) planning and catastrophic incident management*
  - Ensure planning and mitigation strategies for biological threats are coordinated across the Interagency
  - Serve as DHS POC for state, local, tribal, and private sector partners for health preparedness
- Ensure DHS employees are supported by effective *occupational health and safety* programs
  - Standardize and direct a Departmental occupational health and safety program
  - Provide medical oversight for health delivery throughout the Department

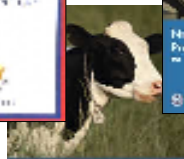
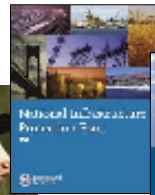


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## Where do our requirements come from?

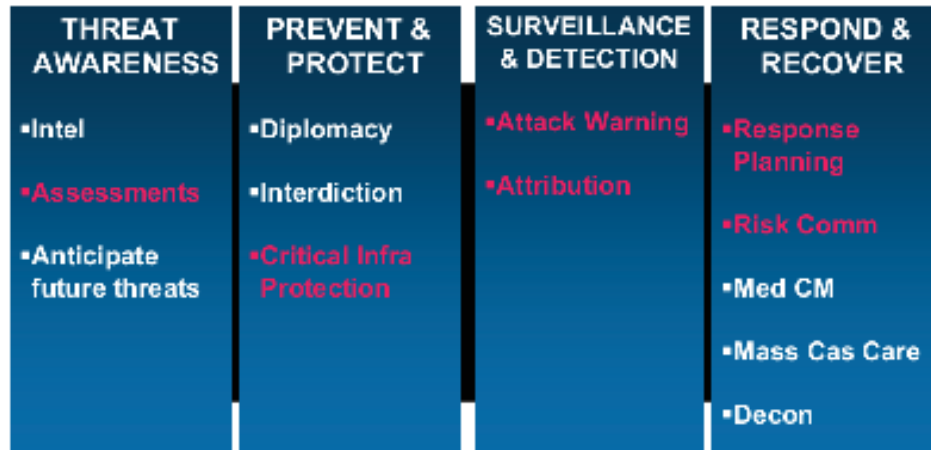
### OHA bases its requirements on

- Homeland Security Presidential Directives – 8, 9, 10, 18, 22
- Congressional legislation & guidance
- National planning & implementation guidance – NIPP, NRP, NIMS, and the National Planning Scenarios
- Risk, vulnerability and mitigation studies
- Federal, State, Local, Private inputs



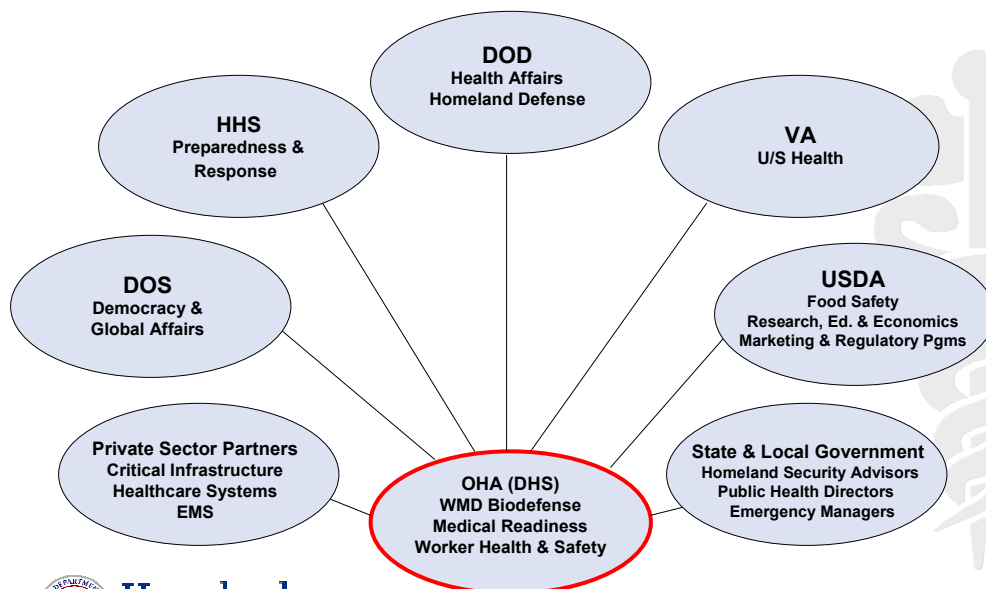
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## HSPD-10 lays out an integrated end-to-end biodefense strategy



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## OHA: Coordination with External Customers



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## Chem/Bio Defense IPT – technology to fill capability gaps

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Assistant Secretary & CMO  
Office of Health Affairs



**James Snyder**  
Assistant Secretary (acting)  
Office of Infrastructure Protection

OHA/IP

Acquisition

Chem/Bio

**Elizabeth George**  
Chem/Bio Director  
Science & Technology Directorate

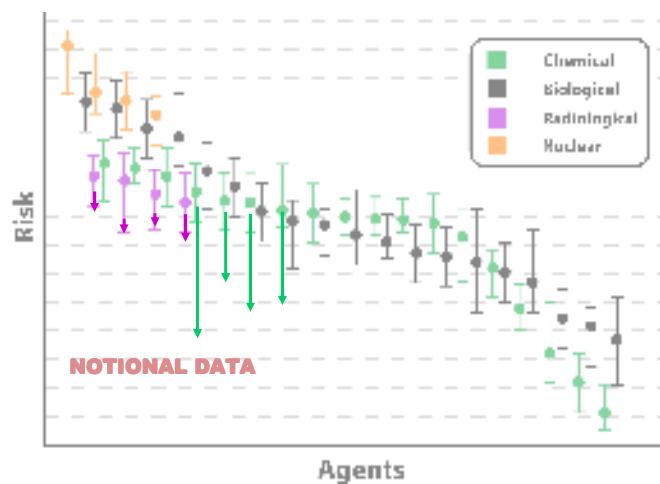
Multiple Users



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## Risk Assessment & Risk Management

Integrated CBRN risk assessment and the individual component risk assessments allow for countermeasure strategy evaluation across WMD threat areas



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# Project BioShield

The *Project BioShield Act of 2004*  
became Public Law 108-276  
on 21 July 2004.



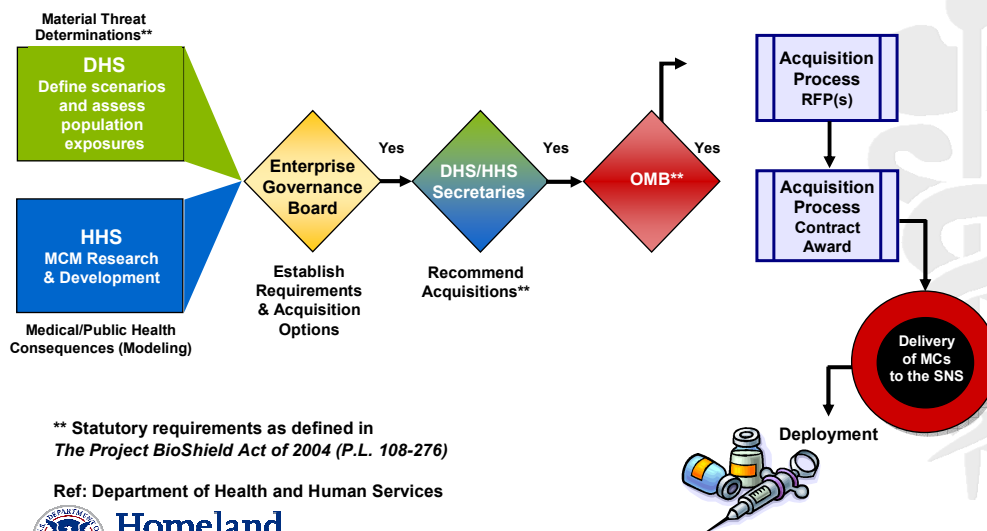
## PURPOSE

To accelerate the research, development,  
purchase, and availability of priority medical  
countermeasures to protect the U.S. population  
from the effects of chemical, biological,  
radiological, and nuclear (CBRN) threat agents.



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# Project BioShield Acquisition Process



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## S&T CBD Assessments supporting the MTDs

- ***Bioterrorism Risk Assessment (BTRA):***

A quantitative, end-to-end risk assessment that integrates the findings of the intelligence and law enforcement communities with input from the scientific, medical, and public health communities.

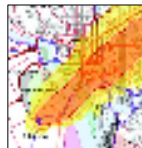
- ***Material (Population) Threat Assessments:***

A set of plausible, high consequence scenarios used to estimate the potential number of exposed individuals, their exposure levels, contaminated areas, and other 'collateral effects.'



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## BioWatch National Network



- Operates continuously in more than 30 major population centers
- Detects attacks against our Nation's cities and other high value assets
- Poised to:
  - Enable early detection
  - Provide situational understanding to guide response
  - Share information among partners
  - Integrate into the national networks of reference laboratories
  - Serve as critical element in a national capacity to respond rapidly to bioterrorism events



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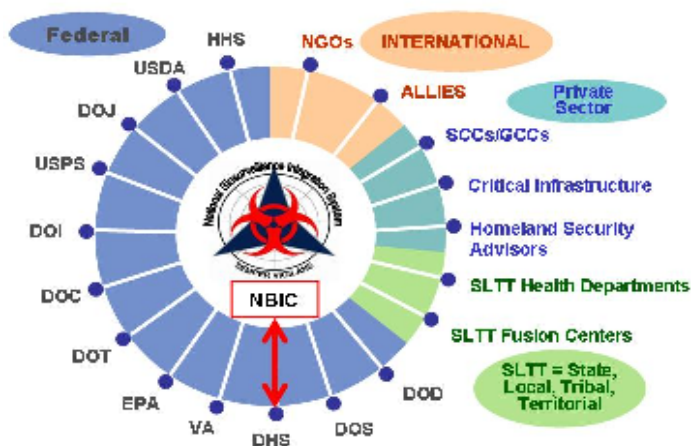
## Food, Agriculture, & Veterinary Defense

- DHS is overall incident manager during national incidents
- Links together resources and expertise of USDA, HHS, DOD, state, tribal, and local governments, and the private sector to protect and respond to threats to the Nation's agriculture and food
- Mitigates vulnerabilities in food, agriculture, and water systems
- Develops a robust biological threat awareness capacity



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## National Biosurveillance Integration System (NBIS) and National Biosurveillance Integration Center (NBIC)



### NBIS Mission Statement

NBIS provides a homeland security-relevant biosurveillance common operating picture that bridges the human disease, food, agriculture, water, meteorological, environmental surveillance systems and relevant threat and intelligence information domains to provide early cueing to mitigate impacts of bio-events

### NBIC Mission

NBIC was established IAW PL 110-53 as the operational hub for the NBIS community. NBIC provides trained analysts and a 24/7 capability to examine worldwide surveillance data across multiple health domains, integrates and assesses real-world bio-events, and provides early cueing and bio-situational awareness to the Secretary, the DHS NOC and other NBIS member agencies.



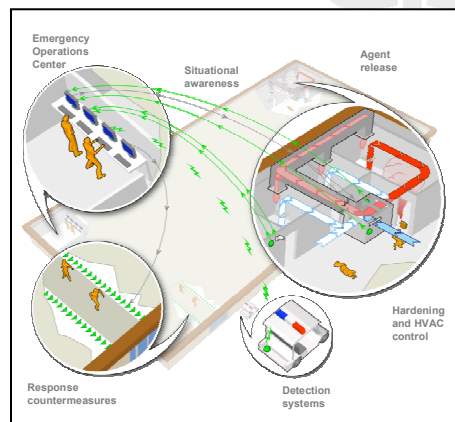
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## Chemical Defense Division (CDD)

The vision of CDD is to save lives and limit suffering and illness in the event of a catastrophic chemical event by:

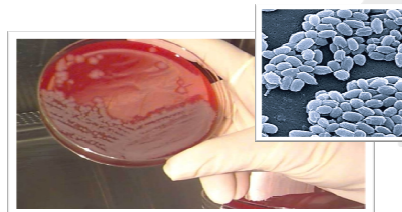
- promoting a national culture of preparedness and synergistic relationships amongst federal, state and local partners (including the public)
- focusing the Nation's vast resources on the critical aspects of a catastrophic chemical event
- integrating all of our nation's chemical defense capabilities both horizontally and vertically in order to develop and effect end to end capabilities.



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## Biosecurity

- Current U.S. Federal Policy for Biological Select Agents and Toxins (BSAT) determines inclusion of pathogens and toxins based on the potential to pose a severe threat to public, animal, or plant health, or to animal or plant products
- Numerous interagency working groups charged with reviewing the current policy have recommended performing a risk assessment for each select agent and toxin on the BSAT list and considering the development of a stratification scheme that includes biodefense and biosecurity criteria, as well as risks to public health, so that security measures may be implemented based upon risk

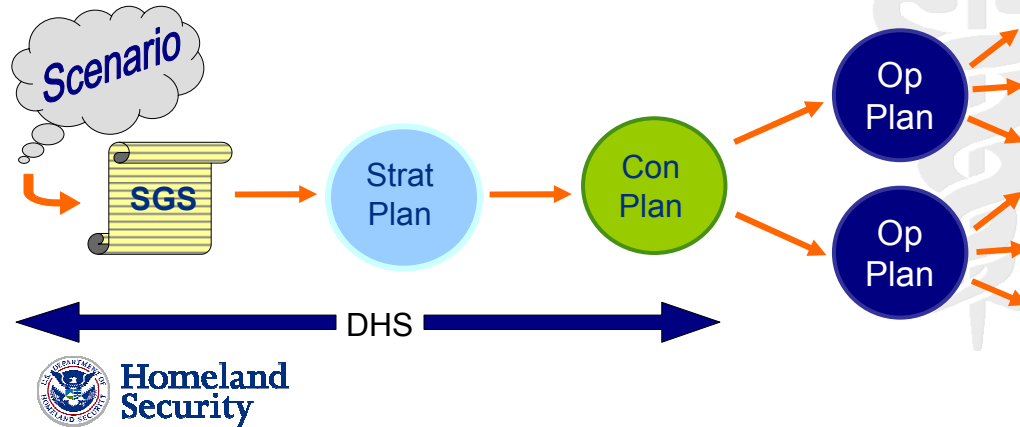


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## Strategic Planning

- HSPD-8 “*National Preparedness*” and Annex 1 “*National Planning*” – establishes a standard and comprehensive approach to national planning to enhance the preparedness of the U.S. against terrorist attacks and natural disasters.
- Planning involves 3 levels: strategic, operational, and tactical.



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# Material Threat Determination (MTD)

A formal determination by the Secretary of DHS that an agent "presents a ...threat...sufficient to affect national security"

## MTDs to-date (13)

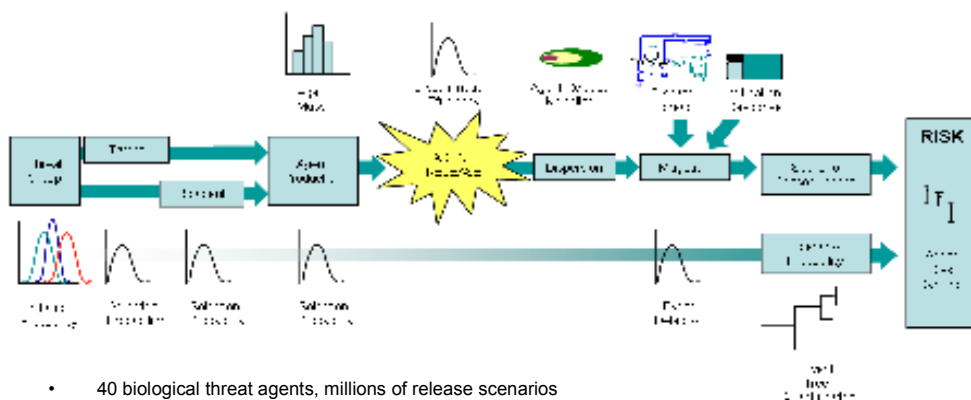
Bacillus anthracis (anthrax)  
 Botulinum toxins (botulism)  
 Burkholderia mallei (glanders)  
 Burkholderia pseudomallei (melioidosis)  
 Ebola virus (hemorrhagic fever)  
 Francisella tularensis (tularemia)  
 Junin virus (hemorrhagic fever)  
 Marburg virus (hemorrhagic fever)  
 Multi-drug resistant Bacillus anthracis (MDR anthrax)  
 Radiological/Nuclear agents  
 Rickettsia prowazekii (typhus)  
 Variola virus (smallpox)  
 Yersinia Pestis (plague)



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## Bioterrorism Risk Assessment (BTRA)

A quantitative, end-to-end risk assessment that integrates the findings of the intelligence and law enforcement communities with input from the scientific, medical, and public health communities.



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